

Montana DEQ Forest Fire Smoke Advisory

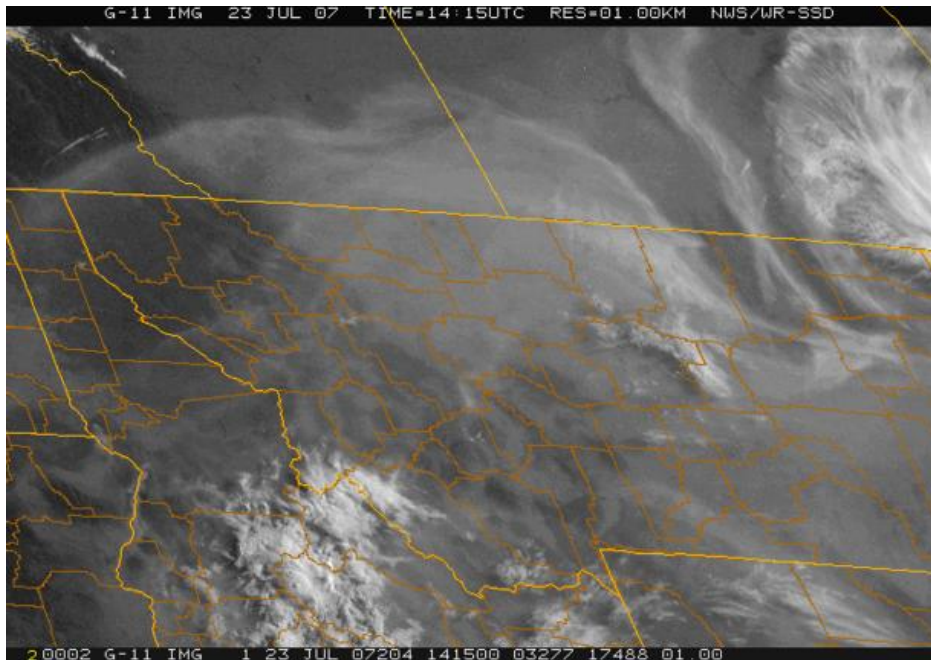
July 23 2007

10:00 AM Monday

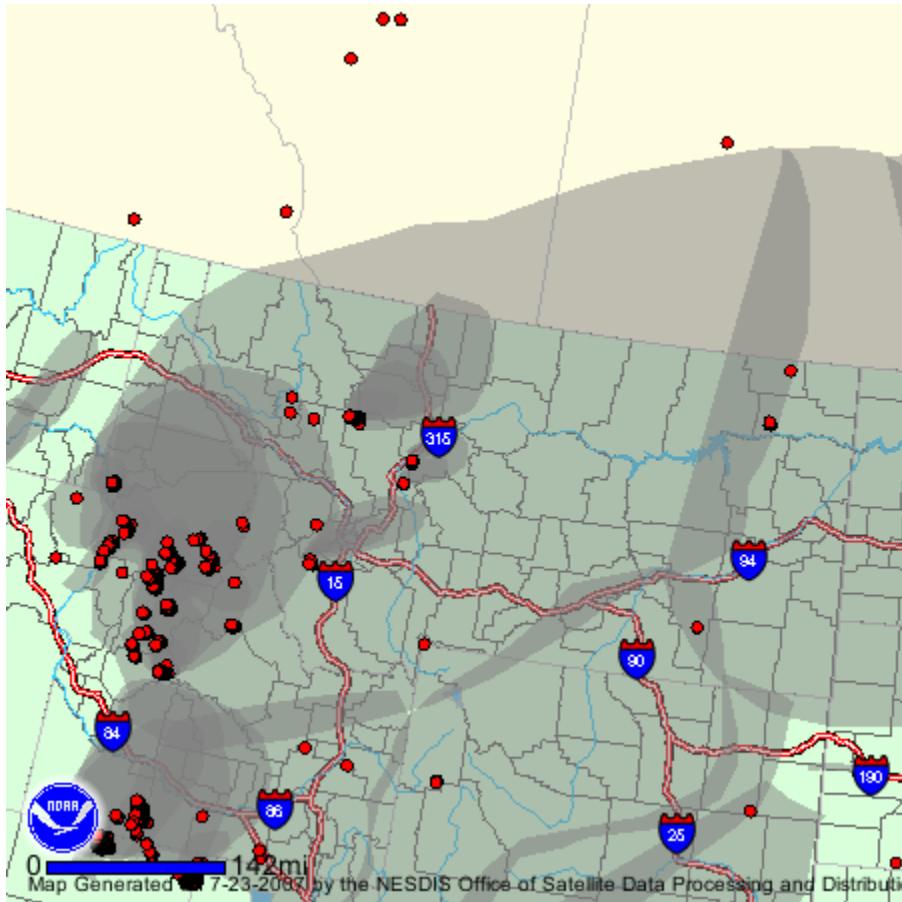
Current Situation

There is another large plume of smoke aloft easily visible on this morning's satellite photo. The smoke was produced yesterday afternoon and evening in Idaho and Montana where when well over 30,000 acres were burned. The plume is slowly moving up into Canada and North Dakota as it rotates over the top of a massive ridge of high pressure centered over the state. Residual smoke from the passage of the smoke aloft is lingering in the valleys of western and southwestern Montana. [UNHEALTHY](#) conditions are currently impacting Butte while [MODERATE](#) conditions are present in Kalispell, Missoula, Hamilton, Helen and Bozeman. Hamilton slipped into the [UNHEALTHY FOR SENSITIVE](#) range for several hours last evening. Smoke from the Ahorn fire west of Augusta has settled into the valleys of the upper part of the Sun River, Gibson Reservoir, and Benchmark areas this morning and conditions there are expected to be [UNHEALTHY](#) or worse. It also looks very smoky in the Gates of the Mountains area due to smoke from the Meriwether fire. More smoke will mix down to the surface later this morning, and increased fire activity this afternoon will drive smoke into communities downwind of the local fires as well. See the forecast below for details. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind(the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last nights satellite coverage)



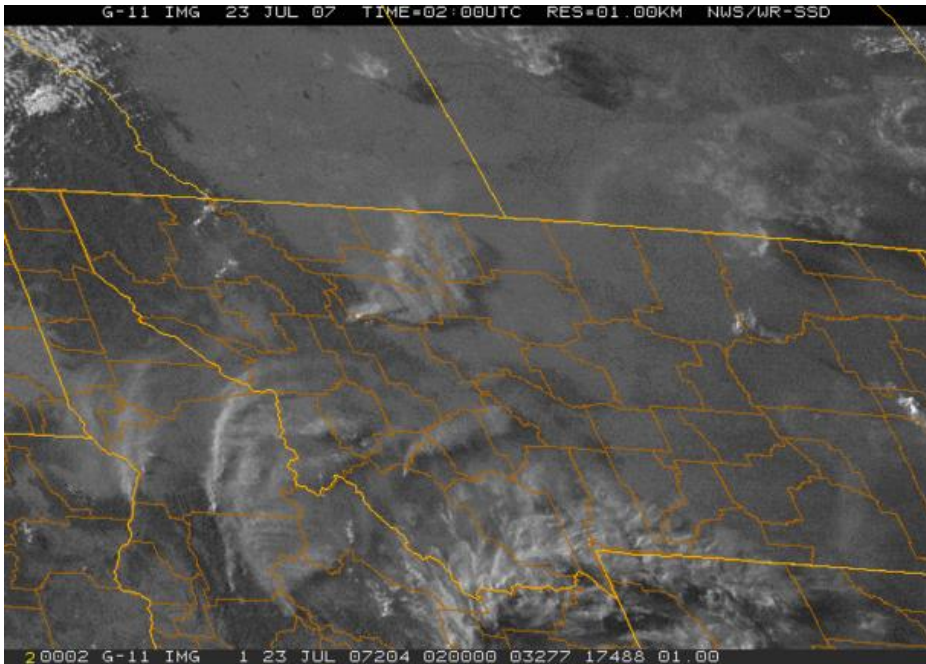
Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

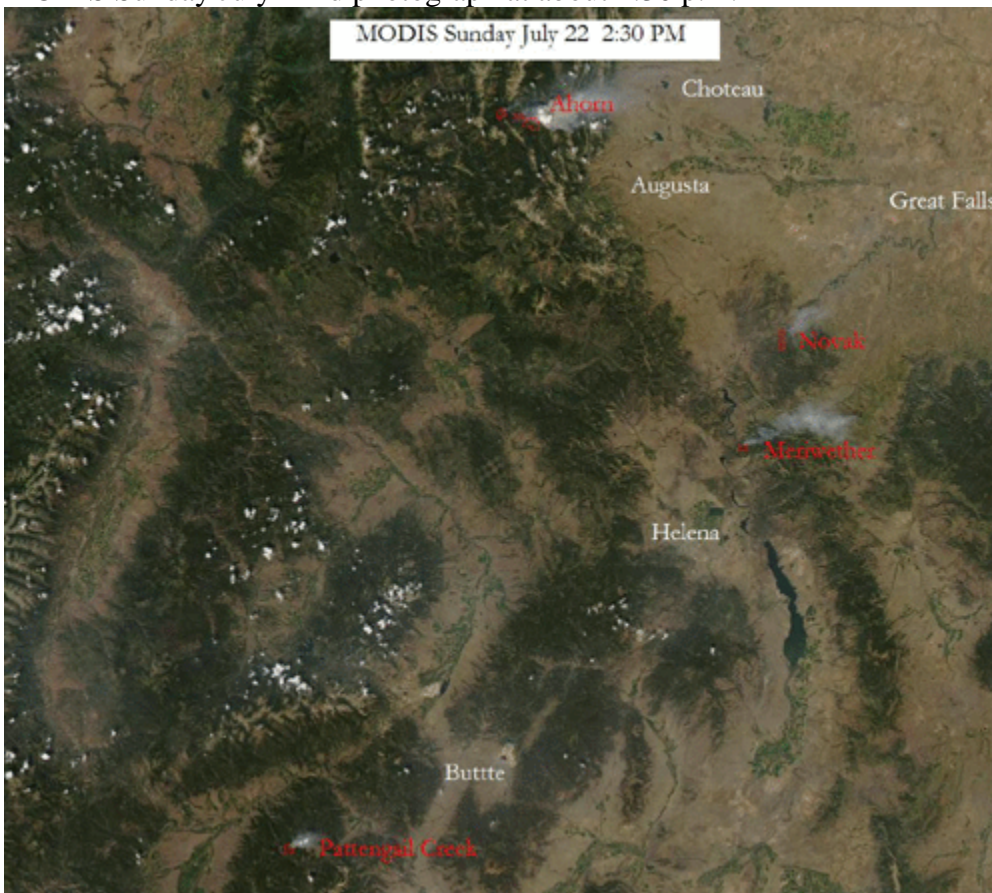
http://activefiremaps.fs.fed.us/lg_fire2.php

Visible Satellite Photo July 23, 2007 8PM MDT

This photo from last night shows the dramatic plumes from the fires in Montana and Idaho that have left all of the smoke aloft this morning.



MODIS Sunday July 22nd photograph at about 2:30 p.m.



Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Updated 10 AM July 23, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

| | |
|---|---|
| <u>HAZARDOUS</u> | |
| <u>VERY UNHEALTHY</u> | |
| <u>UNHEALTHY</u> | |
| <u>UNHEALTHY FOR SENSITIVE GROUPS</u> | Butte T24 |
| <u>MODERATE</u> | Kalispell T8 Missoula T8 Hamilton T8 Helena T8 Bozeman Vis(1) West Yellowstone T24 |

| | |
|---------------------|--|
| T1(x) | One-hour TEOM or BAM value (number of values) |
| T8(x) | Eight-hour average TEOM or BAM value(number of values) |
| T24 | 24 hour average TEOM or BAM value |
| Vis(x) | Visibility value(number of hours) |
| Vis(am/pm) (est) | Visibility value from twice/day reporting stations estimate |

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Forecast

The plume aloft will be very slowly moving off throughout the day and areas of eastern and northeastern Montana will see noticeable impacts at the surface under the plume as the day heats up and the mixing height reaches the smoke layer. Intense but temporary impacts are likely under the thickest parts of the smoke aloft. Clouds are starting to move into southwest Montana along with the smoke as more moisture become available for convective activity. This may help clear the Bitterroot and Missoula valleys somewhat later this afternoon. There will still be lots of smoke but we should get some particulate

scavenging in the cloud layer. It will be another hot day with very high mixing heights so most areas will see lower particulate levels during the hottest part of the day. Smoke will settle in again this evening in many areas of western and central Montana. The rest of the state will see very hazy sky for the rest of the day. Local impacts from the active fires in the state will be of concern today. The Front Range area and Butte will likely see a lot of smoke again today. Areas downwind of active fires could see significant impacts if fire levels increase dramatically. Residents near active fires need to remain aware of current conditions and use the [visibility guidelines](#) to guide their activity decisions as the situation changes.

John Coefield
Meteorologist
Montana Department of Environmental Quality
Jcoefield@mt.gov